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EXAMINER	
CHANKONG, DOHM	
ART UNIT	PAPER NUMBER
2452	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	09/785,884	PHADNIS ET AL.	
	Examiner	Art Unit	
	DOHM CHANKONG	2452	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,6-10,12-15,18-21,25,27-30,32-37,44-50,59,60 and 67-85* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1,2,6-9,15,18-21,37,59,67-69,73-79,81 and 84* is/are allowed.

6)☒ Claim(s) *1,10,12-14,25, 27-30, 32-36, 44-50, 60, 70-72, 80, 82, 83, and 85* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This final rejection is in response to Applicant's amendment filed on 10/29/2010. Applicant amends claims 1, 6, 10, 15, 18, 21, 25, 30, 37, 42-47, 73-75, 84, and 85, cancels claims 5, 16, 17, and 41, and previously cancelled claims 3, 4, 11, 22-24, 26, 31, 38-40, 43, 51-58, and 61-66. Accordingly, Applicant presents claims 1, 2, 6-10, 12-15, 18-21, 25, 27-30, 32-37, 44-50, 59, 60, and 67-85 for further examination.

I. RESPONSE TO ARGUMENTS

In response to the indication of allowable subject of dependent claims 5, 17, and 41, Applicant amends independent claims 1, 15, and 37 to include the limitations of the respective claims. Therefore, independent claims 1, 15, and 37 and their dependent claims are allowed.

Additionally, Applicant amends independent claim 21 to include the limitation of now cancelled dependent claim 5. Claim 21 and its dependent claims are also allowed.

As to the remaining claims, Applicant did not amend them to include any new limitations nor does Applicant provide any substantive arguments as to why the sections cited in the prior art references failed to teach specific limitations of those claims. The examiner therefore maintains the rejection of these claims as set forth in the previous action.

II. ALLOWABLE SUBJECT MATTER

Claims 1, 2, 6-9, 15, 18-20, 21, 37, 59, 67-69, 73-79, 81, and 84 are allowed.

III. CLAIM REJECTIONS - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

A. Claims 10, 14, 25, 29, 30, 35, 36, 42, 46-50, 60, 72, 80, 82, 83, and 85 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Ketcham* (U.S. Patent Number 6,721,334) in view of *Pereira* (U.S. Patent Number 5,781,726), in further view of *Elliot*, U.S. Patent No. 6.775.709.

Claims 10 and 25

Ketcham as modified by *Pereira* and *Elliot* discloses a method of processing an aggregated request packet in an aggregation device, wherein said aggregated request packet is received from a peer aggregation device and indicates that the status of a plurality of point-to-point sessions is requested, said method comprising:

examining said aggregated request packet to determine that the status of said plurality of point-to-point sessions is requested (*Ketcham*, column 8, lines 15-22, wherein the aggregated packet contains the poll requests as disclosed by *Pereira*);

determining the status of each of said plurality of point-to-point sessions (*Pereira*, column 6, lines 1-6 and 50-55);

generating an aggregated reply packet indicating the status of said plurality of point- to-point sessions (*Pereira*, column 6, lines 1-6, wherein *Pereira*'s response polls may be aggregated at *Ketcham*'s router 314); and

sending said aggregated reply packet to said peer aggregation device (*Ketcham*, figure 4, inherently data packets can also flow from router 314 to router 308), wherein the aggregated reply packet indicates the status of at least some of the plurality of PPP sessions (*Pereira*, column 6, lines 1-6), wherein content of a remote status table is updated with the status of the PPP sessions, which have the peer aggregation device as an endpoint [*Elliot,* column 4 «lines 9-16» | column 5 «lines 15-22»: combining plural status messages into a single update message that is broadcast to other routers where the router is an endpoint of the link (i.e., session) to another router where each router represents an aggregation device which update tables remote from the routers], and wherein a proxy keep-alive reply message is sent to one of the plurality of end systems originating a corresponding one of the keep alive-messages without waiting for the aggregated reply packet to be received [*Pereira*, column 5, lines 45-47].

See rejection of claim 1 for reasons to combine *Ketcham* with *Pereira* and *Elliot*.

As claim 25 is merely a claim to an aggregation device that implements the steps of the method of claim 10, claim 25 is rejected for at least the same reasons set forth above.

Claim 14

Ketcham as modified by *Pereira* and *Elliot* discloses the method of claim 10, wherein said aggregation device comprises one of a network access server (NAS) and a home gateway implemented in a communication network (*Ketcham*, column 4, lines 37-43).

Claim 29

Ketcham as modified by *Pereira* and *Elliot* discloses the aggregation device of claim 25, wherein said aggregation device comprises one of a network access server (NAS) and a home gateway implemented in a communication network (*Ketcham*, column 4, lines 37-43).

Claim 30

Ketcham as modified by *Pereira* and *Elliot* discloses an aggregation device for processing an aggregated request packet, wherein said aggregated request packet is received from a peer aggregation device and indicates that the status of a plurality of point-to-point sessions are requested, said aggregation device comprising:

an input interface receiving said aggregated request packet (*Ketcham*, figure 4, item 314, wherein the aggregated packet contains the poll requests as disclosed by *Pereira*);

a de-encapsulator examining said aggregated request packet to determine that the status of said plurality of point-to-point sessions is requested (*Ketcham*, column 8, lines 15-22);

a reply generator determining the status of each of said plurality of point-to-point sessions, and generating an aggregated reply packet indicating the status of each of said plurality of point-to-point sessions (*Pereira*, column 6, lines 1-6, wherein *Pereira*'s response polls may be aggregated at *Ketcham*'s router 314); and

an output interface sending said aggregated reply packet to said peer aggregation device (*Ketcham*, figure 4, inherently data packets can also flow from router 314 to router 308), wherein content of a remote status table is updated with the status of the PPP sessions, which have the peer aggregation device as an endpoint [*Elliot,* column 4 «lines 9-16» | column 5 «lines 15-22»: combining plural status messages into a single update message that is broadcast to other routers where the router is an endpoint of the link (i.e., session) to another router where each router represents an aggregation device which update tables remote from the routers], and wherein a proxy keep-alive reply message is sent to one of the plurality of end systems originating a

corresponding one of the keep alive-messages without waiting for the aggregated reply packet to be received [*Pereira*, column 5, lines 45-47].

See rejection of claim 1 for reasons to combine *Ketcham* with *Pereira* and *Elliot*.

Claim 35

Ketcham as modified by *Pereira* and *Elliot* the aggregation device of claim 30, further comprising a keep-alive processor coupled to said de-encapsulator, wherein said keep-alive processor examines said aggregated request packet to determine that status of point-to-point sessions is requested and causes said reply generator to generate said aggregated reply packet (*Ketcham*, column 8, lines 15-22 and *Pereira*, column 6, lines 1-6).

Claim 36

Ketcham as modified by *Pereira* and *Elliot* the aggregation device of claim 30, wherein said aggregation device comprises one of a network access server (NAS) and a home gateway implemented in a communication network (*Ketcham*, column 4, lines 37-43).

Claim 42

Ketcham as modified by *Pereira* and *Elliot* a computer-readable medium carrying one or more sequences of instructions for causing an aggregation device to process an aggregated request packet, wherein said aggregated request packet is received from a peer aggregation device and indicates that the status of a plurality of point-to-point sessions are requested, wherein execution of said one or more sequences of instructions by one or more processors contained in said aggregation device causes said one or more processors to perform the actions of:

examining said aggregated request packet to determine that the status of said plurality of point-to-point sessions is requested (*Ketcham*, column 8, lines 15-22, wherein the aggregated packet contains the poll requests as disclosed by *Pereira*);

determining the status of each of said plurality of point-to-point sessions (*Pereira*, column 6, lines 1-6 and 50-55);

generating an aggregated reply packet indicating the status of said plurality of point- to-point sessions (*Pereira*, column 6, lines 1-6, wherein *Pereira*'s response polls may be aggregated at *Ketcham*'s router 314);

sending said aggregated reply packet to said peer aggregation device (*Ketcham*, figure 4, inherently data packets can also flow from router 314 to router 308);

receiving an aggregated reply packet from the peer aggregation device [*Ketcham*, column 8, lines 15-22], wherein the aggregated reply packet indicates the status of at least some of the plurality of PPP sessions [*Pereira*, column 6, lines 1-6)], wherein content of a remote status table is updated with the status of the PPP sessions, which have the peer aggregation device as an endpoint [*Elliot,* column 4 «lines 9-16» | column 5 «lines 15-22»: combining plural status messages into a single update message that is broadcast to other routers where the router is an endpoint of the link (i.e., session) to another router where each router represents an aggregation device which update tables remote from the routers]; and

sending a proxy keep-alive reply message to one of the plurality of end systems originating a corresponding one of the keep alive-messages without waiting for the aggregated reply packet to be received [*Pereira*, column 5, lines 45-47].

See rejection of claim 1 for reasons to combine *Ketcham* with *Pereira* and *Elliot*.

Claim 46

Ketcham as modified by *Pereira* and *Elliot* the computer-readable medium of claim 42, wherein said aggregation device comprises one of a network access server (NAS) and a home gateway implemented in a communication network (*Ketcham*, column 4, lines 37-43).

Claim 47

Ketcham as modified by *Pereira* and *Elliot* a communication network comprising:

a first aggregation device (*Ketcham*, figure 4, item 308) receiving a plurality of keep-alive messages (*Pereira*, column 4, lines 31-34) generated by a corresponding plurality of end systems, each of said plurality of keep-alive messages being designed to request the status of a corresponding point to point (PPP) session implemented on said communication network, said first aggregation device generating an aggregated request packet which includes data indicating that the status of said PPP sessions is requested (*Ketcham*, column 7, line 62 through column 8, line 4, wherein the aggregated packet contains the poll requests as disclosed by *Pereira*), and sending said aggregated request packet (*Ketcham*, column 7, line 62 through column 8, line 4); and

a peer aggregation device (*Ketcham*, figure 4, item 314) receiving said aggregated request packet and indicating the status of said plurality of sessions in an aggregated reply packet (*Pereira*, column 6, lines 1-6, wherein *Pereira*'s response polls may be aggregated at *Ketcham*'s router 314), said peer aggregation packet sending said aggregated reply packet to said first aggregation device (*Ketcham*, figure 4, inherently data packets can also flow from router 314 to router 308), wherein each of said first aggregation device and said peer aggregation device is implemented as a single device (*Ketcham*, figure 4, items 308 and 314), wherein content of a

remote status table is updated with the status of the PPP sessions, which have the peer aggregation device as an endpoint [*Elliot,* column 4 «lines 9-16» | column 5 «lines 15-22»: combining plural status messages into a single update message that is broadcast to other routers where the router is an endpoint of the link (i.e., session) to another router where each router represents an aggregation device which update tables remote from the routers], and wherein a proxy keep-alive reply message is sent to one of the plurality of end systems originating a corresponding one of the keep alive-messages without waiting for the aggregated reply packet to be received [*Pereira*, column 5, lines 45-47].

See rejection of claim 1 for reasons to combine *Ketcham* with *Pereira* and *Elliot*.

Claim 48

Ketcham as modified by *Pereira* and *Elliot* the communication network of claim 47, wherein said first aggregation device is located at an edge of said communication networks (*Ketcham*, figure 4, item 308).

Claim 49

Ketcham as modified by *Pereira* and *Elliot* the communication network of claim 48, further comprising an access network coupling said first aggregation device to said corresponding plurality of end systems, wherein said plurality of keep-alive messages are received on said access network (*Ketcham*, figure 4, item 106).

Claim 50

Ketcham as modified by *Pereira* and *Elliot* the communication network of claim 49, wherein said first aggregation device and said peer aggregation device respectively comprise a network access server (NAS) and a home gateway (*Ketcham*, column 4, lines 37-43).

Claim 60

Ketcham as modified by *Pereira* and *Elliot* the method of claim 10, wherein said aggregation device is physically separate from said plurality of end systems (*Ketcham*, figure 4, item 308).

Claim 72

Ketcham as modified by *Pereira* and *Elliot* the aggregation device of claim 30, wherein each of said PPP sessions terminates at a home gateway, and wherein said aggregation device comprises a switching device and is in the path of each of said PPP sessions from a corresponding one of said plurality of end systems to said home gateway (*Ketcham*, figure 4, item 314).

Claim 80

Ketcham as modified by *Pereira* and *Elliot* the method of claim 10, wherein said examining, said determining, said generating and said sending are performed in said aggregation device implemented as a single device (*Ketcham*, figure 4, item 308).

Claim 82

Ketcham as modified by *Pereira* and *Elliot* the aggregation device of claim 25, wherein said means for examining, said means for determining, said means for generating and said means for sending are implemented in said aggregation device implemented as a single device (*Ketcham*, figure 4, item 308)

Claim 83

Ketcham as modified by *Pereira* and *Elliot* the aggregation device of claim 30, wherein said input interface, said de-encapsulator, said reply generator and said output interface are

contained in said aggregation device implemented as a single device (*Ketcham*, figure 4, item 308).

Claim 85

Ketcham as modified by *Pereira* and *Elliot* the computer readable medium of claim 42, wherein said examining, said determining, said generating and said sending are performed by said aggregation device implemented as a single device (*Ketcham*, figure 4, item 308).

B. Claims 13, 28, 32, 34, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Ketcham*, *Pereira* and *Elliot*, further in view of *Chao* et al. (U.S. Patent Number 5,964,837) ["*Chao*"].

Claim 13

Ketcham, *Pereira*, *Elliot* and *Chao* discloses the method of claim 10, wherein said generating comprises setting a bit to one logical value to indicate that a corresponding one of said plurality of sessions is OK/alive, and to another logical value to indicate that said corresponding one of said plurality of session not OK/alive (*Chao*, column 5, lines 50-53).

Claim 28

Ketcham, *Pereira*, *Elliot* and *Chao* discloses the aggregation device of claim 25, wherein said means for generating sets a bit in said aggregated reply packet to one logical value to indicate that a corresponding one of said plurality of sessions is OK/alive, and to another logical value to indicate that said corresponding one of said plurality of session not OK/alive (*Chao*, column 5, lines 50-53).

Claim 32

Ketcham, *Pereira*, *Elliot* and *Chao* discloses the aggregation device of claim 31, further comprising a session manager updating the status of said plurality of point-to-point sessions in said local status table (*Chao*, column 7, lines 64-66).

Claim 34

Ketcham, *Pereira*, *Elliot* and *Chao* discloses the aggregation device of claim 30, wherein said reply generator sets a bit in said aggregated reply packet to one logical value to indicate that a corresponding one of said plurality of sessions is OK/alive, and to another logical value to indicate that said corresponding one of said plurality of session not OK/alive (*Chao*, column 5, lines 50-53).

Claim 45

Ketcham, *Pereira*, *Elliot* and *Chao* discloses the computer-readable medium of claim 42, wherein said generating comprises setting a bit to one logical value to indicate that a corresponding one of said plurality of sessions is OK/alive, and to another logical value to indicate that said corresponding one of said plurality of session not OK/alive (*Chao*, column 5, lines 50-53).

C. Claims 12, 27, 33, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Ketcham* in view of *Pereira*, *Elliot,* and *Chao*, as applied above, further in view of *Simpson* ("RFC 1661: Point-to-Point Protocol," July 1994).

Claim 12

Ketcham, *Pereira*, *Elliot, Chao*, and *Simpson* discloses the method of claim 10, wherein said generating comprises including a client magic number associated with each of said plurality of point-to-point sessions (*Simpson*, pages 45-47).

Although the combination of *Ketcham*, *Pereira*, and *Chao* did not explicitly teach the use of a magic number associated with each session, *Simpson* taught a magic number for use with the point-to-point protocol. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the combination of *Ketcham*, *Pereira*, and *Chao* by adding a magic number as provided by *Simpson*. Again the combination satisfies the need for an improved method of monitoring a point-to-point network. See *Chao*, column 2, lines 15-24. This rationale also applies to other similar dependent claims utilizing the same combination.

Claim 27

Ketcham, *Pereira*, *Elliot, Chao*, and *Simpson* discloses the aggregation device of claim 25, wherein said means for generating includes a client magic number associated with each of said plurality of point-to-point sessions (*Simpson*, pages 45-47).

Claim 33

Ketcham, *Pereira*, *Elliot, Chao*, and *Simpson* discloses the aggregation device of claim 30, wherein said reply generator includes in said aggregated reply packet a client magic number associated with each of said plurality of point-to-point sessions (*Simpson*, pages 45-47).

Claim 44

Ketcham, *Pereira*, *Elliot, Chao*, and *Simpson* discloses the computer-readable medium of claim 42, wherein said generating comprises including a client magic number associated with each of said plurality of point-to-point sessions (*Simpson*, pages 45-47).

D. Claims 70 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Ketcham* in view of *Pereira* and *Elliot*, as applied above, further in view of *Rosenberg* et al. ("An RTP Payload Format for User Multiplexing," May 1998), hereinafter referred to as *Rosenberg*.

Claim 70

Ketcham, *Pereira*, *Elliot* and *Rosenberg* discloses the aggregation device of claim 30, wherein said reply generator includes less data in said aggregated request packet than the data forming said plurality of keep-alive messages together (*Rosenberg*, page 2, paragraph beginning "On the other hand…").

Claim 71

Ketcham, *Pereira*, *Elliot* and *Rosenberg* discloses the aggregation device of claim 70, wherein each of said plurality of keep-alive messages contains an identifier of a corresponding PPP session, wherein said reply generator operates to: select said identifier of each of said plurality of keep-alive messages (*Rosenberg*, pages 3-5, section 2); and form said aggregated request packet from said identifiers (*Rosenberg*, pages 3-5, section 2), whereby said aggregated request packet contains less data than said plurality of keep-alive messages together (*Rosenberg*, page 2, paragraph beginning "On the other hand…").

IV. CONCLUSION

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOHM CHANKONG whose telephone number is (571)272-3942. The examiner can normally be reached on Monday to Friday [10 am - 6 pm].

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thu Nguyen can be reached on (571)272-6967. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DOHM CHANKONG/
Primary Examiner, Art Unit 2452